

Watershed Evaluations

03050203-010

(Chinquapin Creek/Lightwood Knot Creek)

General Description

Watershed 03050203-010 is located in Lexington and Aiken Counties and consists primarily of *Chinquapin Creek and Lightwood Knot Creek* and their tributaries. The watershed occupies 50,803 acres of the Sandhills and Upper Coastal Plain regions of South Carolina. The predominant soil types consist of an association of the Lakeland-Blaney-Troup series. The erodibility of the soil (K) averages 0.15 and the slope of the terrain averages 7%, with a range of 0-15%. Land use/land cover in the watershed includes: 57.7% forested land, 29.3% agricultural land, 7.9% forested wetland (swamp), 2.7% urban land, 1.4% water, 0.8% barren land, and 0.2% nonforested wetland (marsh).

Chinquapin Creek and Lightwood Knot Creek join to form the North Fork Edisto River. Chinquapin Creek originates near the Town of Monetta and accepts drainage from Duncan Creek, Horsepen Creek, Mare Creek, Rock Creek, and Shirley Branch before merging with Lightwood Knot Creek. The Town of Batesburg lies near the headwaters of Duncan Creek and uses a small lake associated with the drainage for its water supply. Lightwood Knot Creek flows through several ponds including Abells Millpond and Brodie Millpond, before accepting drainage from Hellhole Creek (Mill Creek, Rocky Ford Creek, Tanker Branch), Marlowe Creek, Thasher Branch, Mill Creek, and Long Branch. There are a total of 78.4 stream miles and 379.2 acres of lake waters in this watershed, all classified FW.

Surface Water Quality

<u>Station</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
RS-01004	RS01	FW	HORSEPEN CREEK AT US SIDE OF S.C. 391, 1.5 MI S OF BATESBURG
E-091	P/W	FW	CHINQUAPIN CREEK AT SC 391 5.5 MI S BATESBURG
E-101	S/W	FW	LIGHTWOOD KNOT CREEK OFF S-32-77, AT BATESBURG WATER INTAKE
E-600	BIO	FW	LIGHTWOOD KNOT CREEK AT UNNAMED ROAD W OF SR160

Chinquapin Creek (E-091) - Aquatic life uses are fully supported; however, there is a significant increasing trend in total nitrogen concentration. Significant decreasing trends in five-day biochemical oxygen demand and turbidity suggest improving conditions for these parameters. Recreational uses are not supported due to fecal coliform bacteria excursions.

Horsepen Creek (RS-01004) – Aquatic life uses are fully supported. Recreational uses are not supported due to fecal coliform bacteria excursions.

Lightwood Knot Creek – There are two SCDHEC monitoring sites along Lightwood Knot Creek. At the upstream site (*E-101*), aquatic life uses are fully supported, however, there is a significant decreasing

trend in dissolved oxygen concentration and significant increasing trends in five-day biochemical oxygen demand and total phosphorus concentration. Prior to 2001, this was a secondary monitoring station and sampling was intentionally biased towards periods with potentially low dissolved oxygen concentrations. This is also a blackwater system, characterized by naturally low pH and dissolved oxygen concentration. Although pH excursions were noted, they were typical of values seen in such systems and considered natural, not standards violations. Recreational uses are fully supported at this site and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter. Aquatic life uses are fully supported at the downstream site (**E-600**) based on macroinvertebrate community data.

NPDES Program

Active NPDES Facilities

<i>RECEIVING STREAM FACILITY NAME PERMITTED FLOW @ PIPE (MGD)</i>	<i>NPDES# TYPE COMMENT</i>
DUNCAN CREEK TOWN OF BATESBURG-LEESVILLE WWTP PIPE #: 001 FLOW: 2.5	SC0024465 MAJOR DOMESTIC

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

<i>LANDFILL NAME FACILITY TYPE</i>	<i>PERMIT # STATUS</i>
LEXINGTON COUNTY LANDFILL #2 DOMESTIC	DWP-013 CLOSED
UNION CAMP C&D	413313-1201 (CWP-021) -----
UNION CAMP INDUSTRIAL	413313-1601 (IWP-215) -----

Mining Activities

<i>MINING COMPANY MINE NAME</i>	<i>PERMIT # MINERAL</i>
B&T SAND COMPANY, INC. SUMMIT	1215-63 SAND; SAND/CLAY
WILSON BROTHERS SAND CO., INC. RICARD MINE	0639-63 SAND
WILSON BROTHERS SAND CO., INC. FRICK MINE	0718-63 SAND

Water Quantity

WATER USER
WATERBODY

REGULATED CAPACITY (MGD)
PUMPING CAPACITY (MGD)

TOWN OF BATESBURG-LEESVILLE
LIGHTWOOD KNOT CREEK

2.1
4.3

TOWN OF BATESBURG -LEESVILLE
DUNCAN CREEK

1.2
2.5

Growth Potential

There is a low potential for growth in this rural, undeveloped watershed containing portions of the Towns of Batesburg/Leesville and Summit. The Town of Batesburg/Leesville has the only water and sewer service in the area.